

## NOTE ON THE FISHES OF THE GENUS CHARACINUS.

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FOR OVER fifty years the family name *Characini* or *Characiniidæ* has been in use, but during all that time no one has used the generic name *Characinus*. The family name, indeed, has remained without a recognized name-giving genus. It is time that the nomenclature should be accordant with the facts, and the object of this note is to resuscitate the long-neglected name.

In 1754 Gronovius took the name *Charax* for two South American fishes, subsequently referred to the genera *Anacyrtus* and *Tetragonopterus*.

In 1758 Linnæus referred the two Gronovian fishes to his genus *Salmo*, and to the section of that genus named *Characini*.

In 1777 Scopoli adopted the genus *Charax* from Gronovius, and thus formally introduced it into the binomial nomenclature.

In 1802 Lacépède adopted the section of *Characini* as a genus and gave to it the singular form *Characinus*.

It will only be necessary to examine the tenth edition of the "Systema Naturæ" of Linnæus to select the type, but, for the sake of comparison, the species admitted into the twelfth and Gmelin's editions are added.

*References to Characini in the tenth, twelfth and thirteenth editions of Linnæus' Systema Naturæ.*

|                      | Tenth edition. |       | Twelfth edition. |       | Gmelin. |     |                                      |
|----------------------|----------------|-------|------------------|-------|---------|-----|--------------------------------------|
|                      | Page.          | No.   | Page.            | No.   | Page.   | No. |                                      |
| Dentex .....         | (a)            | ..... | .....            | ..... | 1383    | 47  | <i>Myletes niloticus</i> (1).        |
| Gasteropelecus ..... | .....          | ..... | .....            | ..... | 1384    | 48  | <i>Gasteropelecus sternicla</i> .    |
| Gibbosus .....       | 311            | 19    | 513              | 20    | 1384    | 20  | <i>Characinus gibbosus</i> (2).      |
| Notatus .....        | .....          | ..... | 513              | 21    | 1385    | 21  | <i>Tetragonopterus</i> —?            |
| Bimaculatus .....    | 311            | 20    | 513              | 22    | 1385    | 22  | <i>Tetragonopterus bimaculatus</i> . |
| Inmaculatus .....    | 312            | 21    | 513              | 23    | 1385    | 23  | (?)                                  |
| Fætens .....         | .....          | ..... | 513              | 24    | 1385    | 24  | <i>Synodus fætens</i> (4).           |
| Cyprinoides .....    | .....          | ..... | 514              | 25    | 1385    | 25  | <i>Curinata cyprinoides</i> .        |
| Niloticus .....      | 312            | 22    | 514              | 26    | 1386    | 26  | <i>Myletes niloticus</i> (1).        |
| Ægyptius .....       | .....          | ..... | .....            | ..... | 1386    | 49  | <i>Distichodus ægyptius</i> (6).     |
| Pulverulentus .....  | 312            | 23    | 514              | 27    | 1386    | 27  | <i>Tetragonopterus</i> —? (7).       |
| Rhombeus .....       | .....          | ..... | 514              | 28    | 1386    | 28  | <i>Serrasalmus rhombeus</i> .        |
| Anostomus .....      | 312            | 24    | 514              | 29    | 1387    | 29  | <i>Anostomus anostomus</i> .         |

a *Myletes niloticus* = *Salmo niloticus* = *Cyprinus dentex*, Linnæus S. N., 10. ed., p. 325; Mus. Ad. Fr., p. 108, 1764. Many would therefore prefer *M. niloticus*.

It is to be remembered that Gmelin intercalated the species he added to the "Systema Naturæ" according to their supposed affinities, but with the numbers continued from the highest of Linnaeus.

The species with numbers after the accepted names require some consideration.

1. The *Myletes niloticus* or *dentex* is the *Alestes kotschy* (not *dentex*) of Günther, and as it was the only described species for which Cuvier originally<sup>1</sup> framed the genus, it should retain the former generic name. The South American species referred to *Myletes* should take the name *Myleus* of Müller and Troschel. This genus has been divided into two subgenera, *Myletes* and *Myleus*. For the former, *Myloplus* may be taken as a substitute. The classical form *Mylites* (*dentex*) has been used for the typical form by Minding<sup>2</sup>, and perhaps will be accepted by purists. The *S. dentex* of Hasselquist, or *S. niloticus* of Forskål, is a different species—*M. hasselquistii*, Cuvier.

2. The *Characinus gibbosus* is *Alestes gibbosus*, Günther, as already indicated.

3. The *Salmo* (*Characinus*) *immaculatus* is at present unidentifiable.

4. The *Synodus fætens* is *Saurus fætens* of Günther, and of course has no affinity to the Characinids.

5. The *Curimata cyprinoides* must take that name, as *Curimata* was the first Latin form of the name given.<sup>3</sup>

6. The *Distichodus aegyptius* is *D. niloticus*, Günther. Dr. Günther takes the name from Hasselquist, whose work was published in 1757, but if the precepts of the British and American Associations for the Advancement of Science and other biological societies are adopted, no names behind the tenth edition can be accepted. Dr. Günther, in his synonymy<sup>4</sup> quotes "*Salmo aegyptiacus*, Linnaeus, GMELIN, I. p. 1386," but the form used by Linnaeus and Gmelin was *S. aegyptius*. As *Aegyptius* was the older and more classical form, it is not obvious why any one should have wished to alter the name to *Aegyptiacus*.

7. The *Salmo* (*Characinus*) *pulverulentus* has never been identified, but was probably a *Tetragonopterus*.

Inasmuch as Linnaeus really derived the conception of the genus, as well as the basis of this name, from Gronovius, we should take one of the two species originally referred by that author to his genus *Charax*. Swainson, as early as 1839, revived the Linnæan designation (*Characinus*) for the *C. gibbosus*, and Valenciennes was inclined to adopt the Gronovian name (*Charax*) for the genus, to which he nevertheless

<sup>1</sup> Mem. Mus. Hist. Nat., I, 115, 1815; Règne Animal, II, 66, 1817. Dr. Günther went back for *Myletes* only to Cuvier. Mém. Mus., IV, p. 444, when the South American species attributed to it were first described.

<sup>2</sup> Lehrbuch, p. 121, 1832.

<sup>3</sup> Cloquet, Dict. Hist. Nat., XII, p. 240, 1818.

<sup>4</sup> Cat. Fish. Brit. Mus., V, p. 360.

applied the name *Epierytus*.<sup>1</sup> For that genus, therefore, *Characinus* may be revived.<sup>2</sup>

The species of the tenth edition of the "Systema Naturæ" were referred to new genera in the following sequence:

- 1777. *Anostomus*, SCOPOLI (ex GRON.).
- 1815. *Tetragonoptère*, CUVIER.
- 1815. *Myletes*, CUVIER.
- 1817. *Les Tetragonoptères (Tetragonopterus)*, ARTEDI)<sup>3</sup> CUVIER.
- 1845. *Distichodus*, MÜLLER and TROSCHEL.
- 1845. *Alestes*, MÜLLER and TROSCHEL = *Characinus* restricted.

Thus by successive eliminations the genus was finally restricted to *C. gibbosus*. Its synonyms are as follows:

#### Genus CHARACINUS.

##### *Pre-binomial synonyms.*

< *Charax*, GRONOVIVS, Mus. Ichth., I, p. 19 (?), 1754.

##### *Binomial synonyms.*

- < *Characini (Salmo* \* \* \*) LINNÆUS, Syst. Nat., 10. ed., p. 311, 1758.
- < *Charax*, SCOPOLI, Int. Hist. Nat., p. 455, 1777.
- < *Characinus*, LACÉPÈDE, Hist. Nat. Poiss., V, p. 269, 1802.
- < *Characinus*, SWAINSON, Nat. Hist. Fish., etc., II, p. 289, 1839 (not of Vol. I).
- < *Epierytus*, MÜLLER and TROSCHEL, Hora Ichth., II, p. 17, 1845.
- < *Anacyrtus*, GÜNTHER, Cat. Fish. Brit. Mus., V, p. 316, 1864.
- < *Cynopotamus*, GARMAN, Bull. Essex Inst., XXII, p. 11, 1890.
- = *Anacyrtus*, EIGENMANN, Proc. U. S. Nat. Mus., XIV, p. 57, 1891.
- Salmo*, sp., LINNÆUS et al.
- Piabuques esp.*, CUVIER, 1817.

The name *Characinus* has been misapplied by at least two naturalists, viz:

*Characinus*, MINDING, Lehrb. Nat. Fische, p. 119, 1832 (= *Curimata*).

*Characinus*, SWAINSON, Nat. Hist. Fishes, I, pp. 241, 255, 259, 1838 (= *Curimata*).

<sup>1</sup> Cuvier and Valenciennes, XXII, p. 41, 1849.

<sup>2</sup> Some may prefer to take *Charax*, because Linnaeus used the plural form *Characini* for a section not formally designated by him as a subgenus, and I have felt and still feel inclined to adopt it myself.

<sup>3</sup> The generic name *Tetragonopterus* has been erroneously attributed to Artedi, who was too good an ichthyologist to have confounded a *Tetragonopterus* (Cuvier) with a *Tetragonopterus* (Klein, "Τετραγωνοπτερος, i. e., quadratus aspectu"). Inasmuch as Artedi died in 1735 and the "Missus" in which Klein's name first occurs was published in 1744, we have another good reason for believing that Artedi had nothing to do with the name.